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EXAMINER	
WEINMAN, SEAN M	

ART UNIT	PAPER NUMBER
2115	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,438	KATO ET AL.	
	Examiner	Art Unit	
	Sean Weinman	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/25/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-28 are presented for examination.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- Reference character 255 in Figure 8 is not mentioned in the description.
- Reference character 515 in Figure 14 is not mentioned in the description.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention.

Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the start" in line 8 of the respective claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "a section" in line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the "section" recited in claim 1 line 9.

Claim 6 recites the limitation "a time" in line 4 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 6 line 3. Additionally, Claim 6 recites the limitation "a command" in line 4 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 8 recites the limitation "a time dependent" in line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time dependent" recited in claim 7 line 2.

Claim 10 recites the limitation "a time dependent" in line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time dependent" recited in claim 9 line 2.

Claim 11 recites the limitation "a time" in line 5 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 11 line 3. Additionally, Claim 11 recites the limitation "a time" in line 7 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 11

line 3. Additionally, claim 11 recites the limitation "a command" in line 10 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 12 recites the limitation "a time" in line 5 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 12 line 3. Additionally, Claim 12 recites the limitation "a time" in line 7 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 12 line 3. Additionally, claim 12 recites the limitation "a command" in line 10 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 13 recites the limitation "a time" in line 6 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 13 line 3. Additionally, Claim 13 recites the limitation "a time" in line 7 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 13 line 3. Additionally, claim 13 recites the limitation "a command" in line 10 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 14 recites the limitation "a command" in lines 3-4 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 15 recites the limitation "a time" in line 6 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 15 line 3.

Additionally, Claim 15 recites the limitation "a time" in line 7 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 15 line 3. Additionally, claim 15 recites the limitation "a command" in line 10 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 16 recites the limitation "a time" in line 5 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 16 line 3. Additionally, claim 16 recites the limitation "a command" in line 9 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 18 recites the limitation "a time dependent" in line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time dependent" recited in claim 17 line 2.

Claim 20 recites the limitation "a time dependent" in line 2 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time dependent" recited in claim 19 line 2.

Claim 21 recites the limitation "a time" in line 5 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 21 line 3. Additionally, claim 21 recites the limitation "a command" in line 9 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 22 recites the limitation "a command" in line 3 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 23 recites the limitation "a time" in line 5 of the respective claim. It is unclear whether this is intended to be the same as or different from the "time" recited in claim 23 line 3. Additionally, claim 23 recites the limitation "a command" in line 9 of the respective claim. It is unclear whether this is intended to be the same as or different from the "command" recited in claim 1 line 11.

Claim 24 recites the limitation "the start" in line 9 of the respective claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 25 recites the limitation "the start" in line 3 of the respective claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "the start" in line 3 of the respective claim. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "the start" in line 5 of the respective claim. There is insufficient antecedent basis for this limitation in the claim.

Any claim not specifically addressed is being rejected as incorporating the deficiencies of a claim upon which it depends.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 27 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. No physical transformation is recited and additionally, the final result of the claim is a program product that results in non-statutory subject matter because there is no physical transformation or a useful, concrete and tangible result.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a signal directly or indirectly by claiming a medium and the Specification recites evidence where the computer readable medium is defined as a ***"telephone circuit or a network"***. In that event, the claims are directed to a form of energy, which at present, the office feels does not fall into a category of invention.

The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. §101.

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf>

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosch (US Patent No. 6,883,104) in view of Horne et al. (US Patent No. 5,237,694).

As per claims 1 and 24-28, Rosch teaches the claimed invention comprising:

a clock generator for generating a clock *(Figure 1 Reference character 18)*,

a clock controller for controlling the clock generated by the clock generator to determine a clock frequency *(Figure 1 Reference character 28)*,

a storage for storing a software *(Col. 5 lines 21-26)*,

a computing device for implementing the software obtained from the storage in accordance with the clock supplied via the clock controller *(Figure 1 Reference character 10)*,

a specific processing section detector for detecting the start and end of a specific processing section which is a section during which a predetermined specific processing is executed *(Col. 5 lines 16-26, Col. 6 lines 51-5, Col 7 lines 50-67 and Col. 8 lines 1-13)*, and

a clock control judging device for outputting a command to control the clock frequency to the clock controller in accordance with a result obtained by the specific processing section detector *(Col. 7 lines 66-67 and Col. 8 lines 1-13 and Figure 1 Output of Reference character 16)*,

wherein the clock control judging device commands the clock controller to increase the clock frequency if the specific processing section detector has detected the start of the specific processing section while commanding the clock controller to decrease the clock frequency if the specific processing section detector has detected the end of the specific processing section *(Col. 7 lines 66-67 and Col. 8 lines 1-13 and Figure 1 Output of Reference character 16)*.

Rosch does not teach a specific processing section which includes a section in which a predetermined specific processing is executed. Specifically, Rosch teaches a specific processing detector that detects a start of a specific processing section and then increases the clock frequency of the processor during those predetermined instructions. Additionally, Rosch teaches a clock control judging circuit which, in response to the a specific processing section, increases the clock frequency of the processor in response to the start of the predetermined instructions and decreases the clock frequency of the processor in response to the end of processing the predetermined instructions. However, Rosch does not teach that the specific processing section is a section of predetermined specific processing which has a defined start and end that is detected by the specific processing section detector for exclusive processing.

Horne et al. teaches another processing system that detects a start and an end of section of critical instructions or specific processing which requires exclusive processing. Horne et al. teaches the claimed invention comprising the start and end of a specific processing section that is a section during which a predetermined specific processing is executed *(Col. 5 lines 57-68 and Col. 6 lines 1-29)*. In summary, Horne et al. teaches a processing system, which detect the start and end of the specific processing section that is detected by the specific processing section detector for exclusive processing.

It would have been obvious to one of ordinary skill in the art to combine the teachings of Rosch and Horne et al. because they both teach processor system that detect sections of specific processing and then alter the processor states in order to process those sections more efficiently. Horne et al. teaches the deficiency of Rosch by teaching the predetermined processing section

has a defined start and end that is detected the specific processing section for exclusive processing to further optimize the processing of the specific processing section.

As per claim 2, Horne et al. teaches the claimed invention comprising:

the specific processing section is a section during which an exclusive processing is executed *(Col. 5 lines 57-68 and Col. 6 lines 1-29).*

As per claim 3, Horne et al. teaches the claimed invention comprising:

the specific processing section is a predetermined specific section out of a plurality of sections during which exclusive processing are executed *(Col. 5 lines 57-68 and Col. 6 lines 1-29).*

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosch and Horne et al. as applied to claims 1-3 and 24-28 above, and further in view of Tani (US Patent No. 6,826,705).

As per claim 4, Rosch and Horne et al. teach the claimed invention for the reasons stated above. Rosch and Horne fail to teach a power source controller for controlling the voltage of system based on the clock frequency controlled by the detection of a specific processing section. Rosch and Horne et al. teach a processor system detects a specific processing section detector which in response to a specific processing section, increases the clock frequency of the processor in response to the start of the predetermined instructions and decreases the clock frequency of the processor in response to the end of processing the predetermined instructions section. Rosch and Horne et al. fail to teach a power source controller which controls the voltage of the system based on the detection of a specific processing section.

Tani teaches a processor system which uses a power command signal to control the power of the processor system. Tani teaches the claimed invention comprising power-source controller for controlling a voltage to be supplied to the computing device and the storage upon obtaining clock frequency information from the clock controller, wherein the power-source controller increases the voltage when the clock frequency is increased while decreasing the voltage when the clock frequency is decreased *(Col. 1 lines 32-46 and Col. 2 lines 46-63 It would have been obvious to one of ordinary skill in the art that when the clock frequency is increased that the voltage is increased to increase the efficiency of the processor. Additionally, it would have been obvious to one of ordinary skill in the art that the voltage is decreased when the clock frequency is decreased in order to reduce the power consumed).* In summary, Tani teaches a processor system that controls the power and clock settings of the system based on power command signal based on an optimized operating condition of the processor.

It would have been obvious to combine the teachings of Rosch, Horne et al. and Tani because they all teach a system of managing the power and clock frequency of a processor system. Tani covers the deficiencies of Rosch and Horne et al. by teaching that the voltage of the system is controlled based on a power command signal to further decrease the power consumed by the processor system.

As per claim 5, Tani teaches the claimed invention comprising:

the clock controller increases the clock frequency in a stepwise manner within a range where the computing device is operable as the voltage is increased by the power-source controller *(Col. 2 lines 46-63 It would have been obvious to one of ordinary skill in the art that*

the frequency and voltage be increased within a range where the device is operable so that the device can operate properly).

Allowable Subject Matter

Claims 6-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean Weinman whose phone number is (571) 272-2744. The examiner can normally be reached on Monday-Friday from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on (571) 272-3667. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sean Weinman
Examiner

Art Unit 2115